



Health, Safety and Environment

SAFE WORK PLAN

SMS 086NA
Supplemental Information B

Issue Date: August 2010
Revisions 1: March 2012

Project Name / Client: BP Whiting

Project Number: 40942531

Project Manager James Clarke

Scope of Work	
Scope of Work and Major Tasks	Operation and Maintenance of four ambient air monitoring stations on fence line of BP Whiting refinery. Operation and Maintenance of four open path monitoring systems.
Job Location (Provide as much detail as possible)	BP Whiting refinery; four air monitoring sites. Three along the west fenceline near Schrage Avenue, and one near the coker-2 facility at Dickey Road and 129 th Street. Open Path monitoring systems will be co-located with air monitoring sites.
URS employees assigned	Phil Hight, onsite technician, occasional visits by URS Measurements staff for support work; cell number is 512-788-6256
Subcontractors and their scope of work	none
Minimum Required Personal Protective Equipment	<ul style="list-style-type: none">• Hard hat• Safety glasses with side shields• Safety toed boots/shoes• ANSI Class 2 high visibility apparel for work near roads or heavy equipment (Class 3 apparel is required for work at night or during periods of poor visibility)• Gloves specific for the task• Refer to JSA for additional PPE requirements for specific tasks Note: Downgrading/upgrading of the above mentioned PPE must be approved by the HSE manager or designee.
Required Training	OSHA 10-hour general worker, BP 8-hour safety orientation
Dates of the work	Evergreen



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Emergency Contacts and Facilities			
Fire	219-473-1212		
Police	219-473-1212		
Medical	219-473-1212		
EMERGENCY Nearest Hospital	Name: St. Catherine Hospital	Phone Number: 219-392-7164	
Address & Directions to Nearest Hospital (Map Attached? <input type="checkbox"/> YES <input type="checkbox"/> NO)	Address: 4321 Fir Street East Chicago, IN 46312	Directions: Indianapolis Blvd., South to Columbus Dr., East to Grand Blvd., South to 144 th .	
NON-EMERGENCY Nearest Occupational Health Clinic	Name: St. Catherine Occupational Health Clinic	Phone Number: 219-392-7424	
Address & Directions to Nearest Occupational Health Clinic (Map Attached? <input type="checkbox"/> YES <input type="checkbox"/> NO)	Address: 4321 Fir Street #313 East Chicago, IN 46312	Directions: Directions: Indianapolis Blvd., South to Columbus Dr., East to Grand Blvd., South to 144 th .	
Responsible Personnel			
Project Manager	Name James Clarke	Office Phone # 512-419-5379	Cell Phone # 512-423-9522
Health, Safety, and Environment Representative	Name Patrick Walz	Office Phone # 512-419-5792	Cell Phone # 512-221-3195
HSE Manager	Name Mike Fuqua	Office Phone # 512-419-6020	Cell Phone # 512-217-9391
Client	Name Linda Wilson	Office Phone # 219-473-3287	Cell Phone # 219-545-5403
Subcontractor(s)	Name N/A	Office Phone #	Cell Phone #
URS Occupational Nurse	Name Jeannette Schrimsher	Office Phone # 512-419-6440	Cell Phone # 512-656-0203



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Complete the SMS Checklist. Print all applicable SMS and attach to this plan

The following URS Safety Management Standards (SMS) generally apply to all field projects. Review the requirements of each SMS and determine appropriate steps to ensure project compliance with the requirements.

SMS CHECKLIST					
Determine the applicability of these SMS to your project	Yes	See SMS #	Determine the applicability of these SMS to your project	Yes	See SMS #
Emergency Preparedness Plan	Yes	003	Sanitation	Yes	030
Housekeeping	Yes	021	Regulatory Inspections	Yes	001
Vehicle Safety	Yes	057	Health, Safety, and Environment Training	Yes	055
New Employee HSE Orientation	Yes	025	Incident Reporting and Notifications	Yes	049
Significant Incident Investigation	Yes	066	Injury and Claims Management	Yes	065
Behavior Based Safety	Yes	072	Managing HSE Related Risks	Yes	086
Management of Change	Yes	098			

The following URS SMS only apply when specific activities are conducted by URS and URS subcontractor personnel. If you answer "Yes" to any of the questions below, review the SMS indicated and determine the appropriate steps necessary to ensure project compliance with the requirements.

SMS CHECKLIST							
Will project activities involve any of the following?	No	Yes	See SMS #	Will project activities involve any of the following?	No	Yes	See SMS #
Abrasive blasting or exposure to abrasive blasting media or waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	006	Excavations or exposure to excavation hazards?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	013
Potential exposure to ticks, snakes, poisonous plants, and other biological hazards?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	047	Flammable or combustible materials used or stored which could constitute a fire hazard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	014,015
Use of aerial lifts?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	007	Use of portable, gas powered, electric, and/or powder actuated hand tools?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	016
Potential exposure to air contaminants in hazardous concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	043, 042, 050	Hazardous materials shipping?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	048



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SMS CHECKLIST							
Will project activities involve any of the following?	No	Yes	See SMS #	Will project activities involve any of the following?	No	Yes	See SMS #
Asbestos surveys or abatement oversight?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	008	Hazardous substances – chemical or health hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	002
Potential exposure to Bloodborne Pathogens (i.e. blood or other bodily fluids)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	051	Hazardous waste activities (investigative or remedial)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	017
Work over or near water?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	027	Heat Stress potential to employees working in: <ul style="list-style-type: none"> • Hot environments; or • Impermeable Chemical Protective Clothing? 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	018
California job activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	005	Heavy equipment in use at this project site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	019
Corrosive materials used or handled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	009	Hot Work (welding, cutting, grinding)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	020
Confined space entries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	010	Industrial site access of any kind?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	004
Cranes or hoists?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	038,041	Lead exposures (lead paint removal, lead in dust, etc)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	022
Demolition activities of any type of structures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	011	International travel?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	036
Drilling activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	056	Use of Manbasket (Crane Suspended Personnel Platforms) for working at heights?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	038, 041
Use of small watercraft (e.g., boats, canoes)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	053	Work on or near streets and/or roadways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	032
Exposure to chemical/physical/biological agents and/or activities that require Medical Surveillance? Examples would include exposures to; Noise, Asbestos, Lead, Hazardous Waste, High Altitudes, Carcinogens, Respirator Use.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	024	Exposure to uncontrolled energy sources including electrical, fluid, pneumatic, fuel, steam, gravity, and hazardous material?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	023
Noise exposures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	026	Potential exposure to subsurface and/or overhead utilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	034
Ladder use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	028	Potential exposure to Unexploded Ordnance/Chemical Warfare agents?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	039
Exposure to eye, head, hand, foot, or other hazards that require the use of personal protective equipment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	029	Underground Storage Tank investigation, removal, etc.?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	033



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SMS CHECKLIST							
Will project activities involve any of the following?	No	Yes	See SMS #	Will project activities involve any of the following?	No	Yes	See SMS #
Use of portable gauges (e.g., nuclear-density gauges) containing sealed radioactive source materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	044	Work with live electrical systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	012
Respiratory protection use – required and/or voluntary?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	042	Work at altitudes greater than 7,000 feet (~ 2,100 meters)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	035
Scaffolding?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	031	Working at heights of greater than 4 feet (1.22 meters) or 6 feet (1.83 meters) for construction/demolition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	040
Manual lifting and/or material handling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	069	Use of computer workstations for data entry, CADD, word processing, etc.?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	054
Work on or near railroad transportation systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	063	Exposure to recognized hand hazards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	064
Work at a client site requiring compliance with the OSHA Process Safety Management Standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	058	Are employees or contractors required to operate Powered Industrial Vehicles (i.e. forklift trucks)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	070
Subcontractors to perform high risk activities (including drilling and excavation) with their own personnel and/or equipment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	046	Potential exposure to ionizing radiation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	052
Potential personnel exposure to temperatures below 32°F?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	059	Down-hole geologic logging operations associated with geotechnical explorations or caisson inspections?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	077
URS personnel newly hired or transferred from another position?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	078	Potential inhalation of chromium VI (hexavalent chromium)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	083
Diving activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	085	Working alone in an area where they cannot be seen/heard by another person?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	084
Work at a site regulated by the Mine Safety Health Administration (MSHA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	037	Hoists, elevators or conveyors being used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	045
Coordinate building material storage on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	062	Tunnels, shafts and caissons?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	082
Operating and testing compressed air systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	087	Signs, signals or barricades will be used onsite?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	088
Temporary floors being created?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	089	Project security will be required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	090



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Will project activities involve any of the following?	No	Yes	See SMS #	Will project activities involve any of the following?	No	Yes	See SMS #
Concrete will be poured or handled?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	091	Installation of cofferdams being performed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	092
Steel erection activities being performed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	093	Use or handling of explosive or blasting agents?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	094
Work on or transfer to/from marine transportation (e.g. barge, vessel)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	095	Mining operations are conducted or controlled by URS?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	096
Working conditions or schedule (more than 12 hours/day) may increase worker fatigue?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	060	Exposure to hazards associated with moving parts of equipment and machinery?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	061



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JOB SAFETY ANALYSIS

For those major tasks identified in the Scope of Work, complete the Job Safety Analysis below. Use additional sheets, as necessary.

DATE:	December 13, 2013	X NEW	<input type="checkbox"/> REVISED	PAGE 1 of 2
WORK ACTIVITY (Description): Operating ambient air monitoring station				
DEVELOPMENT TEAM	POSITION/TITLE	REVIEWED BY	POSITION/TITLE	
Phil Hight	URS Technician	James Clarke	URS Sr Project Manager	
Randy Stephens	URS Senior Technician/ Task Leader			


JOB STEPS ¹	POTENTIAL HAZARDS ²	HAZARD CONTROL PROCEDURES ³
Operations	Gases	Transport and move cylinders only with caps in place; secure at all times using straps or chains
		Check all regulator connections for leaks; set output pressure to correct setting for use
		Store flammables only in outside storage box. Check O2/LEL sensor status before entering each shelter; green light is all clear, but if red light is showing and an audible alarm is heard (LEL is >1%), DO NOT OPEN THE DOOR. Look inside window from a safe distance of three feet to verify that no fire is present. If fire is burning, evacuate immediately and follow BP fire emergency reporting procedures (part of BP plant entry training modules). If no fire is present, open flammables box and shut off H2 cylinder, then contact Operations Supervisor Randy Stephens, or PJM James Clarke. Do not take any further action until you are cleared to do so by a URS project team manager. If a yellow light is showing and an alarm is heard (O2 <21%), open the shelter door but DO NOT ENTER for at least ten minutes to allow for fresh air to replace the atmosphere inside (the alarm will reset once safe levels are established). Leave the door open and contact the Operations Supervisor or PJM for further instructions.
	Electrical	De-energize analyzers before doing maintenance on inside components (unplug and switch off)
		Use only approved and installed power outlet strips
		Eliminate any water on floor immediately (snow melt)
	Mechanical	Use safety catch and operate tower crank slowly when servicing met tower; keep hands clear




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JOB STEPS ¹	POTENTIAL HAZARDS ²	HAZARD CONTROL PROCEDURES ³
		Use three points of contact on ladder while accessing roof; latch railing safety gate behind you
		Never lean over or stand on roof safety railing
	Housekeeping	Maintain a clean, dry floor at all times in the shelters; regularly empty trash accumulation
		Do not store boxes or equipment such that they present an obstacle to exiting the shelter
		Replace light tubes and bulbs quickly after they burn out
	Shipping Hazmat	Compressed gases have specific requirements for properly identifying, labeling, and shipping
		Workers must be trained before shipping gas cylinders, read SMS 048 and receive training from
		URS sanctioned Hazmat shipping instructors (Carl Galloway in Austin)
	General	Monitoring sites are within BP plant fence line; all workers must receive safety orientation prior to
		entry. Comply with BP safety regulations while onsite and be aware of the conditions immediately
		surrounding the monitoring site. Comply immediately with any warnings or announcements. Perform a personal tailgate meeting to identify hazards associated with tasks planned for the day at each site.

	<p align="center">Health, Safety and Environment</p> <p align="center">SAFE WORK PLAN</p>	<p align="right">SMS 086NA Supplemental Information B</p> <p align="right">Issue Date: August 2010 Revisions 1: March 2012</p>
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JOB STEPS ¹	POTENTIAL HAZARDS ²	HAZARD CONTROL PROCEDURES ³

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Person drafting this Safe Work Plan:

Randy Stephens



Operations Supervisor

1/8/14

Name

Signature

Title

Date

Project Manager Approval:

James Clarke



Project Manager

1/9/14

Name


Signature

Title

Date

Health, Safety, and Environment Approval *

Patrick Walz



HSE Representative

1/9/14

Name

Signature

Title

Date

** Note: Approval must be by the designated Health, Safety and Environment (HSE) Representative, the HSE Manager, or any URS Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP). If the work activities covered under this SWP pose a high risk (e.g., working at heights, excavation, demolition, confined space entry, work over water, or drilling), the completed document must be approved by a HSE Manager.*

Plans are only valid for one year from the date of approval, unless otherwise noted.

- 1 Each Job or Operation consists of a set of steps. Be sure to list all the steps in the sequence that they are performed. Specify the equipment or other details to set the basis for the associated hazards in Column 2.
- 2 A hazard is a potential danger. What can go wrong? How can someone get hurt?
- 3 Aligning with the first two columns, describe what actions or procedures are necessary to eliminate or minimize the hazards. Be clear, concise and specific. Use objective, observable and quantified terms. Avoid subjective general statements such as, "be careful" or "use as appropriate".